MEETING SUMMARY:

Industry Canada's
Electronic Authentication Policy Workshop
Courtyard by Marriott - Toronto
9:00 a.m. - 3:00 p.m.
Monday, December 6, 1999

Background: *This Workshop was convened by Industry Canada's Electronic Commerce Task Force as part of its ongoing work in support of Canada's electronic commerce strategy. This Workshop brought together stakeholders from the private and public sectors to discuss the development and use of electronic authentication and certification services in Canada. It followed on a series of preliminary consultations held between May and October 1999 and involved a range of stakeholder representatives including suppliers of products and services, auditors, consultants, business and consumer end users, and a number of provincial government officials. See* ***Attachment 1*** *for a list of participants. This meeting report reflects the range of diverse views and opinions expressed by participants and should be read in conjunction with the summary report on the initial consultations and the three working papers that were provided to participants in advance of the Workshop. As such, it is part of an ongoing dialogue on electronic authentication established by Industry Canada.*

1. Opening Remarks:

Peter Ferguson, Electronic Commerce Task Force, Industry Canada

Industry Canada's Electronic Commerce Task Force welcomed participants and emphasized the informal, participatory nature of the Workshop. Canada's electronic commerce agenda and corresponding strategy was reviewed, with particular attention paid to the policy elements related to electronic authentication. With respect to these elements, participants were advised that work was ongoing and that Industry Canada had embarked on a series of consultation initiatives aimed at identifying the public policy considerations, obtaining views on the respective roles of the private and public sectors in addressing them, and defining next steps.

The principle findings of the initial consultations as contained in the *Summary of Findings of Bilateral Consultations* (October 1999) that had been provided to all Workshop participants were reviewed. Participants were advised that this Workshop followed on those initial consultations and that the day would consist of three panels: the first to explore the market development

opportunities and challenges; the second to examine the various options for approaches to self-regulatory accreditation schemes; and the third, to identify the public policy considerations associated with authentication and certification services. It was noted that a plenary session at the end of these panels would focus on identifying next steps.

In addressing the three panel discussion areas, participants were reminded that there was a need to remain mindful of the international dimensions of the environment. In this connection, a brief overview of the ongoing work within UNCITRAL (United Nations Commission on International Trade Law), the EU (European Union), the OECD (Organization for Economic Co-operation and Development and APEC (Asia-Pacific Economic Co-operation) was provided. An update on a new ITU (International Telecommunications Union) initiative aimed at examining the feasibility of developing international standards on electronic signatures and certification authorities was also provided. In concluding remarks, it was noted that, despite the array of initiatives aimed at international collaboration in this area, a diversity of national approaches to authentication services had emerged making international compatibility challenging.

2. Market Development - Opportunities and Challenges (Panel 1)

Moderator: *Wayne Scott, IBM Canada Limited*
Panelists: *Brian O"Higgins, Entrust Technologies Limited*
David Johnson, Electronic Commerce Canada
Drew Brown, Scotiabank

During introductory remarks, the moderator noted that, while the business-to-business sector use of electronic authentication services was growing, this was not the case in the business-to-consumer sector and that there was therefore a need to advance the authentication agenda within that realm. However, he observed that, even though security and privacy continue to be rated as the biggest concerns for consumers, there appeared to be a certain degree of ambivalence. He suggested that this was evidenced by consumer acceptance of traditional authentication tools that were not capable of addressing security concerns to the degree possible with newer technology, along with their participation in consumer loyalty programs that have privacy implications. On this basis, the moderator acknowledged that the task would be a challenging one.

Following these remarks, the panelists were each provided with an opportunity to offer their perspective on market trends, opportunities and challenges. During their presentations, the panelists suggested that, in terms of challenges to market development, complacency was potentially the biggest threat in this market and that Canada's competitive advantage needed to be "fuelled". It was observed that the use of electronic authentication technologies calls for the addition of a policy infrastructure to address the governance issues (e.g., setting out who issues certificates, who can confirm identity, who is liable for the transaction) and that it would be to Canada's benefit to develop such an infrastructure if it wanted to lead in this marketplace.

It was emphasized that there is a need to make a business case for authentication services with stakeholders and market the advantages of the technology. It was suggested that consumers seemed to have a false sense of security with some of the tools in use today (e.g., "SSL" or secure socket layer) and that the inconsistent security levels employed within, and across, industries was a complicating factor that would need to be addressed with communication initiatives.

It was suggested that, from a consumer perspective, in order to advance the security agenda for electronic commerce, there was perhaps a need for a widespread compelling application that required transacting parties to use certificates to prove their identities to each other. From a business perspective, the need for re-engineering legacy systems to accommodate more robust authentication techniques and the reallocation of resources to this area following Y2K challenges were viewed as operative factors in moving forward.

During the course of the discussion that followed the panelist remarks, and in response to questions raised by various participants, it was observed that:

- with the Y2K challenges behind us, there may be a significant increased investment in information technology security and that initially, it will most likely be applied to internal corporate applications, secondly to business-to-business transactions and finally to the business-to-consumer component;

- the market potential is perhaps greatest with business-to-business applications, but in moving forward, there is a need to take a comprehensive approach that also takes into account consumer dimensions;

- consumers will be looking for transparent solutions and that the ease and simplicity of a portal approach (with the potential for single sign-on access to a set of certificates stored at the portal server) will be attractive to them;

- there is a need to separate identification and authorization allowing for identity to be managed on a centralized basis and authorization managed on a distributed basis;

- recognizing that 100 percent security is not achievable, there will always be a need to employ due diligence, perform risk assessments and allocate liability in the context of authentication services; and,

- a business case and a risk management model is required to implement electronic authentication techniques (small business may feel they have challenges in taking this on).

3. Approaches to Self-Regulatory Accreditation Schemes (Panel 2)

Moderator: *Michael Geist, University of Ottawa*
Panelists: *Frank MacDonald, Royal Bank*
Jim Savary, Consumers' Association of Canada
Yogen Appalraju, Canadian Institute of Chartered Accountants (Ernst & Young)

In his introductory remarks, the moderator agreed with the earlier observation that, from a consumer perspective, security and privacy were the biggest issues in the context of electronic commerce. He suggested that, with growth, these issues would get bigger, not smaller, and that this would argue even more for the development and implementation of self-regulatory mechanisms in this marketplace. He provided an overview of the options available for self-regulatory approaches that had been discussed in the working paper and then invited the panelists to address the group.

During the course of their remarks, the panelists expressed general support for the principles identified by Industry Canada and the stakeholders consulted to date. There was, however, an observation that the principle of "encouraging competition" in terms of the banking industry should be at the certification authority (CA) level but may not be appropriate, or desirable, at the root CA level.

With respect to the options for self-regulatory approaches, it was suggested that a "standards-based" approach aimed at the development of common standards, policies and practices offers utility from a business perspective in terms of facilitating interoperability. It was observed that this could broaden the usefulness of closed public key infrastructures (PKIs). It was suggested that this approach would also be favoured by consumers since it would enhance their ability to make choices and provide for accountability in this marketplace. In terms of timing, it was suggested by some that the case for standards was compelling and that efforts should begin as soon as possible so that all the players "know the rules" and costly retrofitting of systems at some later date can be avoided.

In discussing the need for accreditation schemes, it was suggested that accreditation is a necessary condition of the trust that is critical to this environment. It was also suggested that the question of who should "accredit" CAs is not an issue as long as there is conformity assessment, sanctions, redress and ongoing compliance assessments (it was recognized that such auditing requirements could constitute a barrier to entry in this market but that it would probably be viewed beneficially from a consumer perspective). It was observed that organizations already having an auditing function and a history of providing assurance services are well positioned to apply them to this environment.

While some believed the Government has already taken the appropriate steps for this environment (e.g., developed suitable legislation to support digital signatures, and implemented the GOC-PKI and its role as a model user) and expressed the view that there is no current need for government involvement in the regulation of accreditation schemes, others believed that there is guidance

needed from the Government relative to the allocation of responsibilities and liabilities when relying parties make use of certificates.

In the ensuing discussion, participants and panelists offered views that:

- the use of assurance seals as an industry standard had cost implications that could be especially burdensome to small business (although representatives from the accounting sector said this would not necessarily be the case as the costs involved would be a function of the size and complexity of the operation);

- from a consumer perspective, an easily understood "assurance standard" that could be relied on was essential, but that user education would be required if it was to not be misleading in any way;

- the roles of existing regulated industries could perhaps be expanded to allow for them to provide the trust links between "brands" that will be required in this marketplace;

- in order to build the required trust, a (minimum) standards-based approach was a "must" and that if they were developed at the domestic level, it would position Canada well internationally;

- common standards are currently being developed by some of the larger provinces (Ontario, Quebec and others) and as long as these, and any other standards developed, are affordable to implement, it should be possible for small provinces to also adopt them;

- the benefit will come with open models (backed with contracts to allocate liability) but that there is a need for a mechanism to pull key players together from the various industry sectors to arrive at such models;

- a central Registration Authority (RA) that adheres to the highest level of assurance may be a critical element in any co-ordinated approach to rolling out these services;

- the Government has a role to play in terms of providing guidance and setting direction as opposed to one of a rigid regulatory nature (although some expressed the view that legislation was required to apportion, and perhaps limit, the liability amongst the players since contracts could only do this in a narrow way); and

- the Government also has a key role to play in this market in terms of protecting national interests to ensure that any approach adopted allows for Canadian consumers and business to interoperate at an international level.

4. Public Policy Considerations (Panel 3)

Moderator: *Peter Ferguson, Electronic Commerce Task Force, Industry Canada*
Panelists: *David Waite, Office of Consumer Affairs*
Bill Munson, Information Technology Association of Canada
John Gregory, Ministry of Attorney General, Government of Ontario

The moderator introduced the third panel noting that, given the inter-related nature of the subject matter, he anticipated that it would likely reflect some of the discussion that had taken place in the previous two. On this basis, and due to time constraints, he proposed that this last panel session would flow directly into the concluding plenary session.

During the course of the panelist presentations, it was suggested that:

- there appeared to be a tendency for consumers to bear more liability the more technology was relied upon and that electronic authentication technologies were perhaps no exception (e.g., those implementations that provide for non-repudiation make the possibility of "unauthorized" transactions difficult);

- with respect to liability, there is a need for up-front disclosure of liability and that this needed to be addressed in standards if legislation was to be avoided in this area (with a potential result being a range of provincial approaches);

- there is a need for the negotiation of standards to include consumer representatives and provincial government officials so that a cross-border approach could be achieved (which was viewed to be the only viable approach in the international context);

- the public interest is broader than only the consumer interest and should also encompass small business; and,

- whatever Canada decided to do in this area, it needed to keep in mind its international trade obligations and the need for inclusivity.

Prior to turning to the plenary session, an update on the initiatives within the Uniform Law Conference of Canada (ULCC) and UNCITRAL was provided. In this connection, participants were advised that:

- the *Uniform Electronic Commerce Act* had been adopted by the ULCC in October 1999;
- it is essentially legislation that implements the UNCITRAL *Model Law on Electronic Commerce*;

- the *Act* makes no attempt to legislate liability and is a minimalist statute that allows for the development of standards;
- it is to be adopted in the very near future by one province, and that it is hoped that it will also be enacted by other member jurisdictions; and
- the work underway within UNCITRAL is aimed at setting out duties and responsibilities of the various parties to a transaction and defining the legal effect of electronic signatures.

5. Plenary Discussion

Moderator: *Richard Simpson, Electronic Commerce Task Force, Industry Canada*

The moderator began his remarks by stressing the importance of the international dimensions to electronic authentication. He explained that his recent attendance at the World Trade Organization meetings in Seattle had convinced him of both this, and the value of inclusivity.

Summary remarks on the highlights of the three panel session were provided and participants were advised that the plenary session would focus on identifying what actions should be taken in the coming months. It was suggested that the actions taken should be aimed at giving Canada a competitive advantage in this market given the importance of electronic commerce to national economies. A summary of discussion points of the panels that had been prepared over the lunch break was reviewed. Participants generally agreed with the summary of points but suggested that the subject of privacy should also be included (see ***Attachment 2*** for the revised list of discussion points).

In terms of developing a strategy for action in this area, the moderator suggested that there was a need to establish priorities and the respective roles and responsibilities of the public and private sectors in addressing each. In this connection, he suggested that there was a need to identify the specific players from each sector, specify their areas of accountability and also a need to apply more precise definition to certain elements that had been proposed (e.g., to define exactly what would constitute a standards-based approach).

The moderators of the three panels were then invited to offer their views and during the course of their remarks and the ensuing discussion, it was suggested that:

- there was a conflict between the time required to develop solutions and the enormity of the challenge in creating them;
- the task of identification was a relatively simple one but that the real question was what it would be used for;
- while the business-to-consumer portion of the market had been estimated to be only 10 percent of the total market (with the balance being accounted for by business-to-business applications) the breakdown, as evidenced by the day's discussions, does not appear to accurately reflect where interests actually lie;

- consumers and small business appeared to share the same interests in this market;
- there was a need for a mechanism that would bring together the public and private sectors to address the forward agenda in this area and that participation from the academic community would be important;
- in any forward agenda, it would be important to align terminology to ensure all stakeholders had a common understanding; and,
- there was a need to ensure that the initiatives underway within various international bodies were consistent and non-duplicative.

In discussing potential approaches to standards development, it was suggested that a framework was required and that such a framework should have business process, legal and technical elements. It was suggested by some that any standards development activity would need to bring together all industry sectors at the outset to establish some "cross-cutting" standards that would link all sectors and that governments had a role to play in terms of, at least at the outset, establishing a forum to bring together the various sectors for this purpose. However, others believed that there was a need for the various sectors to first pursue the development of standards in their respective industries as it was this approach that had been successfully used in the past in the context of other technologies and ventures.

With respect to the provincial standards-development activity already underway, it was explained that efforts were focussed on examining the elements of certificate policies that could become a standard and that this same approach could presumably also be extended to the level of certificate practice statements. It was observed that this approach could probably be successfully applied on a broader basis. While there was no disagreement with this observation, it was suggested that the requirement was not so much for technical standards, but rather for standards that addressed the needs of the various stakeholder groups (where there were voids). During the course of this discussion, it was suggested that the needs of small business were particularly great in this area and that consideration should be given to conducting workshops and information sessions aimed at increasing the awareness and use of strong authentication techniques within this particular group of stakeholders.

In general discussion of roles and responsibilities in the forward agenda, it was acknowledged that, instinctively, there may be a tendency on the part of stakeholders to opt for no government involvement in this area. However, it was suggested that the Government did in fact have a role to play, especially at this early stage of the work, in terms of being a driver for establishing a policy framework that would cut across industries as well as provincial and international borders. In this connection, it was observed that if efforts were broken out by industry sector as had been suggested, it would be difficult for the private sector to take the lead. In conclusion, it was determined that the Government should play a role but that it should do so in a way that is complementary to Canada's private sector and its initiatives in this area.

6. Next Steps

It was agreed that, based on the consultations and the international and applications developments, Industry Canada's Electronic Commerce Task Force would develop a discussion paper setting out a proposed forward action agenda for electronic authentication. It was suggested that the paper should attempt to crystallize thoughts on some of the key questions that have been raised to date, propose a set of models/options and related strategic initiatives aimed at addressing them, and finally, suggest the respective public and private sector roles in the context of each. It was agreed that the discussion paper would be developed for review by stakeholders who have been part of the consultation process. It is intended that a version of the paper that takes into account input received by these stakeholders would then be distributed to a wider audience.

It was acknowledged that the work in this area would be ongoing and that such a paper could only be used as starting point. It was also recognized that, while it may be premature to explore the institutional and governance issues given the nascent stage of the market, there were advantages to commencing the work now in terms of ensuring a preparedness and readiness in the event of significant domestic and international developments. Finally, it was suggested that the Workshop had been useful and that it may be desirable to bring stakeholders together again in the future at certain stages of the work but that much could also be accomplished electronically.

Attachment 1

Electronic Authentication Policy Workshop
List of Participants

Atelier sur les politiques en matière d'authentification électronique
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Attachment 2

Electronic Authentication Policy Workshop

Summary of Discussion Points

(revised)

- There are **barriers** to entry in this market in terms of cost (for business and consumers)and with respect to the need for branding.
- There is a need to determine how to reasonably apportion **liability** amongst participants.
- The development and use of **privacy-respecting services** is important.
- A **standards-based** approach:

  - will require a pooling of business interests;
  - can be a means to avoid inequities; and,
  - can assist with international positioning for Canada.

- There is a need to determine what **consumers and small business** enterprises need to know about electronic authentication services.
- There is a need to determine how the implementation and use of electronic authentication techniques can be made **simple and usable** (for both small business and consumers).
- There is a case for centralized management of **identity** and distributed management of **authorization**.
- The development of a **policy infrastructure** (e.g., to address business processes and governance issues) is required at a domestic level but linking to the international level.
- The market is dynamic and evolving, but there does not appear to be, as yet, any **compelling application** for the technology.
- There are several **roles for Government** that require elaboration.

December 17, 1999